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Atmospheric Electricity Network: coupling with the Earth System, climate and biological systems

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An atmospheric electric field (AEF) of 100 V/m to several kV/m exists in the atmosphere, resulting from a global electric circuit extending from the surface to the lower ionospheric layers. The study of many environmental processes can benefit substantially by the inclusion of atmospheric electricity. Such processes include, but are not limited to, earthquakes, aerosols / clouds and climate, sun-earth interactions, air pollution, lightning etc. Further, there is emerging evidence that AEF variations may interfere with biological processes, including human brain function. To overcome the lack of coordination of different research efforts in these fields, the proposed Action aims to involve and integrate existing resources in the field of atmospheric electricity, create a network, enhance interaction and create the necessary critical mass of researchers and facilities to advance knowledge, introduce new techniques, transfer know-how. By these means the Action will also improve the understanding of a number of processes that lie at the interface of solid earth, environmental, biological, climatic and solar/terrestrial sciences.
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